

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Bhaskar et al.  
App. No : 10/540,829  
Filed : February 21, 2006  
For : DAIRY PROTEIN PROCESS AND APPLICATIONS THEREOF  
Examiner : Badr, Hamid R.  
Art Unit : 1781  
Conf No. : 2247

DECLARATION OF SKELTE GERALD ANEMA UNDER 37 C.F.R. § 1.132

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

I, Skelte Gerald Anema, of Palmerston North, New Zealand, do hereby declare and say as follows:

1. I am a Senior Research Scientist employed by Fonterra Co-operative Group Limited. I hold a D.Phil. in Chemistry from the University of Waikato, New Zealand and have worked in dairy research for 20 years. I finished my D.Phil. in Chemistry in New Zealand in 1989 and in 1990 I joined the New Zealand Dairy Research Institute and have been at the Institute (currently called Fonterra Research Centre) for the past 20 years. During this employment, I have had two periods of extended staff development leave (12 to 18 months for each leave period) collaborating with Universities and Research organizations in Germany. My main work has been in understanding the mechanisms of milk protein denaturation and interactions during dairy product processing and how these impact on milk protein ingredient manufacture and subsequent functionality in applications such as cheese foods, yoghurts and beverages.

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2. I have read and understand the claims in the present patent application, application serial number 10/540,829. I understand that the claims concern a process for preparing a high heat treated concentrated milk protein ingredient with improved solubility and a process for using the milk protein ingredient in cheese manufacture.

3. I have read and understand the rejections in the Office Action dated May 14, 2010. I understand that the Examiner has asserted that the pending claims are not novel over Delespaul et al. (FR 2452879), and not inventive over Bhaskar et al. (WO 01/41578) in view of Delespaul et al. (FR 2452879).

4. The examiner found that Delespaul teaches a dried MPC or MPI having denatured whey proteins. I have reviewed the reference and it is my opinion that Delespaul does not disclose a dried MPC or MPI having denatured whey proteins. There is no teaching in Delespaul that indicated to me that drying the heat treated retentate would produce a useful product.

5. In the Office Action the examiner asserts that:

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to follow the teachings of R2 and R1 to prepare high yield MPC and MPI of the presently claimed invention and to make cheese free nuggets which results in more consistent and efficient cheese making (page 1, lines 21-23, R2).

6. Without the knowledge in the present disclosure, I would not have combined Bhaskar et al. with Delespaul.

7. Prior to the present invention, it would have been understood that the heating step of Delespaul would make the MPC solution too viscous to dry to form a powder.

8. Prior to the present invention, it would have been understood that heat treating the MPC at near neutral pH would not produce a cold soluble product.

9. Prior to the present invention it was not known that reduced calcium MPC could be effective in preventing loss of the whey protein into the whey in a traditional cheese making process even if heat treated, and based on the knowledge at that time it was not obvious to me that it would. Delespaul does not provide any teaching in that regard because Delespaul uses ultrafiltration to remove water from the cheese milk to avoid the necessity for separating whey

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from casein. Thus Delespaul does not separate the whey and provides no reason to use reduced calcium MPC to prevent loss of the whey protein in a traditional cheese making process.

10. Also the official USPTO translation of Delespaul suggests that protein interactions are reduced by calcium reduction (page 4, line 8).

11. I would understand from the knowledge of skill in the art and the specification that the term substantially nugget-free means nuggets are not present or are present in an amount that is not readily visible.

12. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. I declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

Dated: 12 November 2010

By:



Skelte Gerald Anema